Nutrition labelling: Further reading

Presentation

The nutrition declaration must be presented in tabular form with the numbers aligned unless space does not permit, in which case a linear format can be used.

In relation to this it should be noted that Article 37 of the FIC states that voluntary information (which includes marketing information) should not be displayed to the detriment of the space available for mandatory information.

Portions and consumption units

Data in the mandatory declaration or the voluntary front of pack declaration can be given on a per portion or per consumption unit basis. The portion or consumption unit must be easily recognisable by the consumer and must be quantified in close proximity to the declaration. The number of portions or units contained in the package also needs to be stated somewhere on the label.

A consumption unit is a single unit of food you might take from a packet, for example, one biscuit, one chicken nugget, one sausage. A portion is an amount which might be consumed on one occasion, for example, half a pizza, two sausages. The unit or portion can be quantified as part of its description in the declaration (for example, 'per half jar (180g)', 'per slice (40g)', 'per cupcake (10g)'.

Nutrition labelling exemptions

Most prepacked manufactured foods must be labelled with mandatory nutrition labelling. However, the following prepacked foods are exempt from nutrition labelling:

1. Unprocessed foods that comprise a single ingredient or category of ingredients
2. Processed products which the only processing they have been subjected to is maturing and that comprise a single ingredient or category of ingredients
3. Waters intended for human consumption, including those where the only added ingredients are carbon dioxide and/or flavourings
4. A herb, spice or mixtures thereof
5. Salt and salt substitutes
6. Table top sweeteners
7. Products covered by Directive 1999/4/EC relating to coffee extracts and chicory extracts, whole or milled coffee beans and whole or milled decaffeinated coffee beans

8. Herbal and fruit infusions, tea, decaffeinated tea, instant or soluble tea or tea extract. Decaffeinated instant or soluble tea or tea extract, which do not contain other added ingredients than flavourings which do not modify the nutritional value of the tea
9. Fermented vinegars and substitutes for vinegar, including those where the only added ingredients are flavourings
10. Flavourings
11. Food additives
12. Processing aids
13. Food enzymes
14. Gelatine
15. Jam setting compounds
16. Yeast
17. Chewing gums
18. Food in packaging or containers the largest surface of which has an area of less than 25 cm2
19. Food, including handcrafted food, directly supplied by the manufacturer of small quantities of products to the final consumer or to local retail establishments directly supplying the final consumer. (Guidance is expected from the Department of Health on how ‘manufacturer of small quantities’ and ‘local’ in this context should be interpreted.)

Nutrient definitions

‘Nutrient’ means protein, carbohydrate, fat, fibre, sodium, vitamins and minerals and substances which belong to or are components of one of those categories.

‘Fat’ means total lipids, and includes phospholipids

‘Saturates’ means fatty acids without double bond

‘Trans fat’ means fatty acids with at least one non-conjugated (namely interrupted by at least one methylene group) carbon-carbon double bond in the trans configuration

‘Mono-unsaturates’ means fatty acids with one cis double bond

‘Polyunsaturates’ means fatty acids with two or more cis, cis-methylene interrupted double bonds

‘Carbohydrate’ means any carbohydrate which is metabolised by humans, and includes polyols

‘Sugars’ means all monosaccharides and disaccharides present in food, but excludes polyols

‘Polyols’ means alcohols containing more than two hydroxyl groups

‘Protein’ means the protein content calculated using the formula: protein = total Kjedahl nitrogen x 6.25

‘Salt’ means the salt equivalent content calculated using the formula: salt = sodium x 2.5

‘Fibre’ means carbohydrate polymers with three or more monomeric units, which are neither digested nor absorbed in the human small intestine and belong to the following categories:

- Edible carbohydrate polymers naturally occurring in the food as consumed
- Edible carbohydrate polymers which have been obtained from food raw material by physical, enzymatic or chemical means and which have a beneficial physiological effect demonstrated by generally accepted scientific evidence
- Edible synthetic carbohydrate polymers which have a beneficial physiological effect demonstrated by generally accepted scientific evidence.

Daily reference intakes for vitamins and minerals

The following table details the daily reference intakes for vitamins and minerals and for energy and other selected nutrients. They are taken from Annex XIII, Part A of the FIC.

Vitamins and minerals which may be declared and their nutrient reference values (NRVs)

Vitamin A (µg)	800	Chloride (mg)	800
Vitamin D (µg)	5	Calcium (mg)	800
Vitamin E (mg)	12	Phosphorus (mg)	700
Vitamin K (µg)	75	Magnesium (mg)	375
Vitamin C (mg)	80	Iron (mg)	14
Thiamin (mg)	1.1	Zinc (mg)	10
Riboflavin (mg)	1.4	Copper (mg)	1
Niacin (mg)	16	Manganese (mg)	2
Vitamin B6 (mg)	1.4	Fluoride (mg)	3.5
Folic acid (µg)	200	Selenium (µg)	55
Vitamin B12 (µg)	2.5	Chromium (µg)	40
Biotin (µg)	50	Molybdenum (µg)	50
Pantothenic acid (mg)	6	Iodine (µg)	150
Potassium (mg)	2000		

Reference intakes for energy and selected nutrients other than vitamins and minerals

These are taken from Annex XIII, Part B of the FIC.

Energy or nutrient	*Reference intake*
Energy	8400 kJ/2000 kcal
Total fat	70 g
Saturates	20 g
Carbohydrate	260 g
Sugars	90 g
Protein	50 g
Salt	6 g

Conversion factors for the calculation of energy

The energy value must be calculated using the following energy conversion factors:

Carbohydrate (except polyols)	17 kJ/g – 4 kcal/g
Polyols	10 kJ/g – 2.4 kcal/g
Protein	17 kJ/g – 4 kcal/g
Fat	37 kJ/g – 9 kcal/g
Salatrims	25 kJ/g – 6 kcal/g
Alcohol (ethanol)	29 kJ/g – 7 kcal/g
Organic acid	13 kJ/g – 3 kcal/g
Fibre	8 kJ/g – 2 kcal/g
Erythritol	0 kJ/g – 0 kcal/g

See the Department of Health's Technical Guidance on Nutrition Labelling and associated Annex giving a flow chart navigating through the nutrition labelling provisions.

Tolerances and rounding

The Commission has published Guidance for Competent Authorities for the Control of Compliance with EU Legislation on Regulation (EU) No. 1169/2011 with regard to the setting of tolerances for nutrient values declared on a label. The guidance is also applicable to nutrition labelling of fortified foods under Regulation (EC) No. 1925/2006 and to nutrition labelling presented as a result of nutrition and health claims made on food.

The guidance does not cover, however, tolerances around the declared value for levels of vitamins and minerals added to foods when the addition is mandatory according to national provisions and for tolerances around declared values for foods for particular nutritional uses regulated by Directive 2009/39/EC.

In terms of declared values, they should approximate to the average values across multiple batches of food and should not be established at either extreme of a defined tolerance range.

If a declared value is outside the tolerance this should be subject to a specific assessment to decide where action/measures should be taken. The guidance lists the following aspects which should be taken into account:

a. The nutrient in question
b. The extent of the deviation
c. The nature of the deviation in relation to the nutrient concerned
d. Natural high variation of the nutrient, including seasonality
e. Particular high degradation rates of nutrients in some food matrices
f. Particular high analytical variability of nutrients in a specific food matrix
g. Particular low homogeneity of a product leading to a particular high variation of nutrient content in a product that is not offset by the sampling procedure
h. Compliance of the majority of samples from the lot with the tolerance range
i. Validity of the manufacturer’s process for establishing the declared nutrient value
j. How the self-monitoring of the company functions in general
k. Previous problems or previous sanctions against the company

Tolerances for foods other than food supplements including measurement uncertainty

Vitamins	+50%** -35%	
Minerals	+45% -35%	
Carbohydrate Sugars Protein Fibre	<10g per 100g: 10-40g per 100g >40g per 100g	± 2g ± 20% ±8g
Fat	<10g per 100g: 10-40g per 100g >40g per 100g	±1.5g ±20% ±8g
Saturates Mono-unsaturates Polyunsaturates	<4g per 100g ≥4g per 100g	±0.8g ±20%
Sodium	<0.5g per 100g ≥0.5g per 100g	±0.15g ±20%
Salt	<1.25g per 100g ≥1.25g per 100g	±0.375g ±20%

** for vitamin C in liquids, higher upper tolerance values could be accepted

Tolerances for vitamins and minerals in food supplements including measurement uncertainty

Vitamins	+50%** -20%
Minerals	+45% -20%

** for vitamin C in liquids, higher upper tolerance values could be accepted

Tolerances for levels of nutrients and other substances for which a nutrition or health claim is made, and vitamins and minerals added to food

In order to ensure that consumers are not misled by nutrition and health claims, especially when the claimed nutritional and/or physiological effect is achieved with a certain amount of a nutrient or other substance for which a claim is made, a tolerance that includes only the measurement uncertainty is applied to one side of the declared value specified in the conditions of use of the claim.

In case only a maximum level is specified, for deviations to the maximum side only the measurement uncertainty is applied while deviations to the minimum side can be accepted within the tolerance range (‘side 1 of tolerance’ or ‘side 2 of tolerance’ respectively). In case only a minimum level is specified, for deviations to the minimum side only the measurement uncertainty is applied while deviations to the maximum side can be accepted within the upper tolerance range (‘side 1 of tolerance’ or ‘side 2 of tolerance’ respectively).

For vitamins and minerals, for deviations to the minimum side only the measurement uncertainty is applied, while deviations to the maximum side can be accepted within the upper tolerance range (‘side 1 of tolerance’).

	Tolerances for foods and food supplements	
	Side 1 of tolerance (includes uncertainty of measurement to the side specified, + or -)	Side 2 of tolerance
Vitamins	+50%**	- Measurement uncertainty
Minerals	+45%	- Measurement uncertainty
Carbohydrate*	<10g per 100g: +4g	- Measurement uncertainty
Protein*	10-40g per 100g: +40%	- Measurement uncertainty
Fibre*	>40g per 100g: +16g	- Measurement uncertainty
Sugars*	<10g per 100g: -4g	+Measurement uncertainty
	10-40g per 100g: -40%	+Measurement uncertainty
	>40g per 100g: -16g	+Measurement uncertainty
Fat*	<10g per 100g: -3g:	+Measurement uncertainty
	10-40g per 100g: -40%	+Measurement uncertainty
	>40g per 100g: -16g	+Measurement uncertainty
Saturates*	<4g per 100g: -1.6g	+Measurement uncertainty
	≥4g per 100g: -40%	+Measurement uncertainty
Mono-unsaturates*	<4g per 100g: +1.6g	- Measurement uncertainty
Polyunsaturates*	≥4g per 100g: +40%	- Measurement uncertainty
Sodium	<0.5g per 100g: -0.3g	+Measurement uncertainty
	≥0.5g per 100g: -40%	+Measurement uncertainty
Salt	<1.25g per 100g: -0.75g	+Measurement uncertainty
	≥1.25g per 100g: -40%	+Measurement uncertainty

* Not applicable to sub-categories

** for vitamin C in liquids, higher upper tolerance values could be accepted

Rounding

Rounding guidelines are among the factors that influence the setting of tolerances, including the number of significant figures or decimal places in order not to imply a level of precision which is not true. The guidance on the rounding of the declared values should be taken into account when estimating whether the value that was determined during the analysis of the control authority is within tolerance limits.

Nutritional element	Amount	Rounding
Energy		To nearest 1kJ/kcal (no decimals)
Fat*, Carbohydrate*, sugars*, protein*, fibre*, polyols*, starch*	≥ 10g per 100g/ml	To nearest 1g (no decimals)
	<10g and >0.5g per 100g/ml	To nearest 0.1g
	No detectable amounts is present or concentration is ≤0.5g per 100g/ml	"0g" or "<0.5g" may be declared
Saturates*, mono-unsaturates*, polyunsaturates*	≥ 10g per 100g/ml	To nearest 1g (no decimals)
	<10g and >0.1g per 100g/ml	To nearest 0.1g
	No detectable amounts is present or concentration is ≤0.1g per 100g/ml	"0g" or "<0.1g" may be declared
Sodium	≥ 1g per 100g/ml	To nearest 0.1g
	<1g and >0.005g per 100g/ml	To nearest 0.01g
	No detectable amounts is present or concentration is ≤0.005g per 100g/ml	"0g" or "<0.005g" may be declared
Salt	≥ 1g per 100g/ml	To nearest 0.1g
	<1g and >0.0125g per 100g/ml	To nearest 0.01g
	No detectable amounts is present or concentration is ≤0.0125g per 100g/ml	"0g" or "<0.01g" may be declared
Vitamins and minerals	Vitamin A, folic acid, chloride, calcium, phosphorus, magnesium, iodine, potassium	3 significant figures
	All other vitamins and minerals	2 significant figures

* Not applicable to sub-categories

Additional form of expression: Colour coding

Front of pack colour coding for the nutrients fat, saturates, sugars and salt is based on the level of the nutrient per 100g or 100ml of the product. This is combined, on the ‘lozenges’, with information on the percentage of the reference intake of the nutrient which is delivered by a portion of the product. It is therefore quite possible for two products to have the same colour coding for a particular nutrient, because the nutrient density is in the same colour band for each, but show different percentage reference intake figures because the portion sizes differ.

Only where the portion size is above 100g or 150ml is the level of the nutrient per portion taken into account and may mean that the nutrient is coded red when it would not be on the nutrient per 100g or per 100ml basis.

See the Department of Health’s Guide to creating a front of pack (FoP) nutrition label for pre-packed products sold through retail outlets.